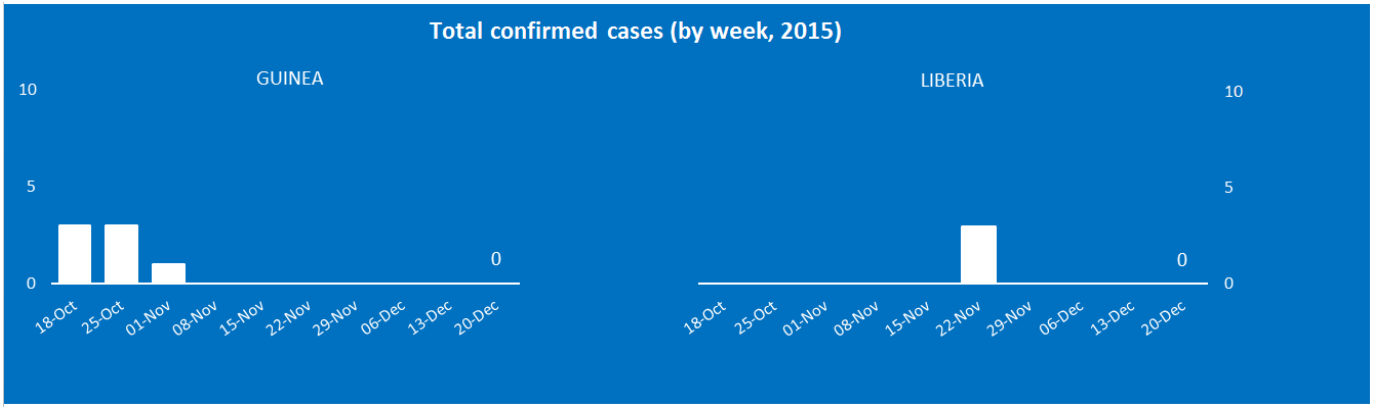
World Health Organization

EBOLA SITUATION REPORT

23 DECEMBER 2015



SUMMARY

- No confirmed cases of Ebola virus disease (EVD) were reported in the week to 20 December. All contacts associated with the cluster of 3 confirmed cases of EVD reported from Liberia in the week to 22 November have now completed 21-day follow-up. The first-reported case in the cluster, a 15-year-old boy, died on 23 November. Two subsequent cases, the boy's father and younger brother, tested negative twice for Ebola virus on 3 December and were discharged.
- Human-to-human transmission linked to the recent cluster of cases in Liberia will be declared to have ended on 14 January 2016, 42 days after the 2 most-recent cases received a second consecutive negative test for Ebola virus, if no further cases are reported. Human-to-human transmission linked to the primary outbreak in Guinea will be declared to have ended on 29 December 2015, 42 days after the country's most recent case, reported on 29 October, received a second consecutive negative test for Ebola virus. In Sierra Leone, human-to-human transmission linked to the primary outbreak was declared to have ended on 7 November 2015. The country has now entered a 90-day period of enhanced surveillance scheduled to conclude on 5 February 2016.
- The recent cluster of cases in Liberia is now understood to have been a result of the re-emergence of Ebola virus that had persisted in a previously infected individual. Although the probability of such re-emergence events is low, the risk of further transmission following a re-emergence underscores the importance of implementing a comprehensive package of services for survivors that includes the testing of appropriate bodily fluids for the presence of Ebola virus RNA. The governments of Liberia and Sierra Leone, with support from partners including WHO and US CDC, have implemented voluntary semen screening and counselling programmes for male survivors in order to help affected individuals understand their risk and take necessary precautions to protect close contacts. 341 male survivors had accessed semen screening services up to 20 December in Liberia and Sierra Leone. A network of clinical services for survivors is also being expanded in Liberia and Sierra Leone, with plans for comprehensive national policies for the care of EVD survivors due to be completed in January 2016.
- In order to effectively manage and respond to the consequences of residual Ebola risks, Guinea, Liberia, and Sierra Leone have each put surveillance systems in place to enable health workers and members of the public to report any case of illness or death that they suspect may be related to EVD to the relevant authorities. In the week to 20 December, 1036 community deaths alerts were reported in Guinea from all of the country's 34 prefectures. Over the same period 9 operational laboratories in Guinea tested a total of 537 new and repeat samples from 13 of the country's 34 prefectures. In Liberia, 842 alerts were received from all 15 of the country's counties. The country's 5 operational laboratories tested 939 samples for EVD over the same period. In Sierra Leone, 1446 alerts were reported from all of the country's 14 districts in the week ending 29 November (the most recent week for which data are available). 991 new samples were tested for EVD by the country's 8 operational laboratories in the week ending 20 December.
- The deployment of rapid-response teams following the detection of a new confirmed case continues to be a cornerstone of the national response strategy in Guinea, Liberia, and Sierra Leone. Each country has at least 1 national rapid-response team, with strengthening of national and subnational rapid-response capacity and validation of incident-response plans continuing through December and January.

Figure 1: Confirmed, probable, and suspected EVD cases worldwide (data up to 20 December 2015)

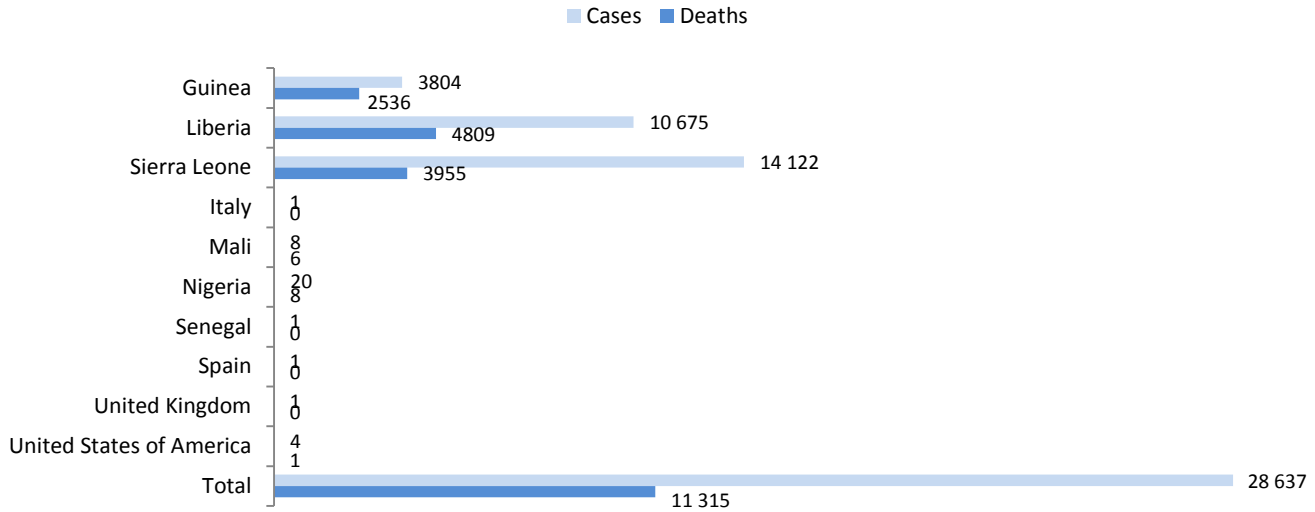


Table 1: Confirmed, probable, and suspected cases in Guinea, Liberia, and Sierra Leone

Country	Case definition	Cumulative cases	Cases in past 21 days	Cumulative deaths
Guinea	Confirmed	3351	0	2083
	Probable	453	*	453
	Suspected	0	*	‡
	Total	**3804**	**0**	**2536**
Liberia**	Confirmed	3151	-	‡
	Probable	1879	-	‡
	Suspected	5636	-	‡
	Total	**10 666**	**-**	**4806**
	Confirmed	9	0	3
	Probable	*	*	‡
	Suspected	‡	*	‡
	Total	**9**	**0**	**3**
Sierra Leone[§]	Confirmed	8704	0	3589
	Probable	287	*	208
	Suspected	5131	*	158
	Total	**14 122**	**0**	**3955**
Total	Confirmed	15 215	0	‡
	Probable	2619	*	‡
	Suspected	10 767	*	‡
	Total	**28 601**	**0**	**11 300**

*Data are based on official information reported by ministries of health. These numbers are subject to change due to ongoing reclassification, retrospective investigation and availability of laboratory results. *Not reported due to the high proportion of probable and suspected cases that are reclassified. [‡]Data not available. **Cases reported before 9 May 2015 are shaded blue. Due to ongoing surveillance and retrospective validation of cases and deaths, these totals may be subject to revision. [§]Sierra Leone was declared free of Ebola virus transmission in the human population on 7 November 2015, and has now entered a 90-day period of heightened surveillance.*

PHASE 3 RESPONSE FRAMEWORK

- 28 601 confirmed, probable, and suspected cases have been reported in Guinea, Liberia, and Sierra Leone, with 11 300 deaths (table 1; figure 2) since the onset of the Ebola outbreak. The majority of these cases and deaths were reported between August and December 2014, after which case incidence began to decline as a result of the rapid scale-up of treatment, isolation, and safe burial capacity in the three countries. This rapid scale-up operation was known as phase 1 of the response, and was built on in the first half of 2015 during a period of continuous refinement to surveillance, contact tracing, and community engagement interventions. This period, termed phase 2, succeeded in driving case incidence to 5 cases or fewer per week by the end of July. This marked fall in case incidence signalled a transition to a distinct third phase of the epidemic, characterised by limited transmission across small geographical areas, combined with a low probability of high consequence incidents of re-emergence of EVD from reservoirs of viral persistence. In order to effectively interrupt remaining transmission chains and manage the residual risks posed by viral persistence, WHO, as lead agency within the Interagency Collaboration on Ebola and in coordination with national and international partners, designed the phase 3 Ebola response framework. The phase 3 response framework builds on the foundations of phase 1 and phase 2 to incorporate new developments in Ebola control, from vaccines and rapid-response teams to counselling and welfare services for survivors. The indicators below detail progress made towards attaining the two primary objectives of the phase 3 framework.

OBJECTIVE 1: RAPIDLY INTERRUPT ALL REMAINING CHAINS OF EBOLA TRANSMISSION

- Human-to-human transmission linked to the recent cluster of cases in Liberia will be declared to have ended on 14 January 2016, 42 days after the 2 most-recent cases received a second consecutive negative test for Ebola virus, if no further cases are reported. Human-to-human transmission linked to the primary outbreak in Guinea will be declared to have ended on 29 December 2015, 42 days after the country's most recent case, reported on 29 October, received a second consecutive negative test for Ebola virus. In Sierra Leone, human-to-human transmission linked to the primary outbreak was declared to have ended on 7 November 2015. The country has now entered a 90-day period of enhanced surveillance scheduled to conclude on 5 February 2016.
- Investigations into the origin of infection of the cluster of 3 confirmed cases of EVD reported from Liberia in the week to 22 November have established that the cluster arose as a result of a rare re-emergence of persistent virus from a survivor. The first-reported case in that cluster was a 15-year-old boy who tested positive for Ebola virus after admission to a health facility in the Greater Monrovia area on 19 November. He was then transferred to an Ebola treatment centre along with the 5 other members of his family. Two other members of the family – the boy's 8-year old brother and his 40-year-old father – subsequently tested positive for EVD whilst in isolation. Both tested negative twice for Ebola virus on 3 December. The 15-year-old boy died on 23 November.
- All contacts associated with the cluster of cases in Liberia have now completed their 21-day follow-up period.
- As of 11 December, 210 eligible recipients associated with the cluster of 3 cases in Liberia had received the rVSV-ZEBOV Ebola vaccine as part of the Partnership for Research on Ebola Vaccines in Liberia (PREVAIL study), which is administered by the Government of Liberia and the US National Institutes of Health.

Table 2: Cases and contacts by prefecture/county over the past 3 weeks

Country	Prefecture/ County	Week 49	Week 50	14 Dec	15 Dec	16 Dec	17 Dec	18 Dec	19 Dec	20 Dec	Week 51	Contacts under follow up*
Guinea	Forecariah	0	0	0	0	0	0	0	0	0	0	0
Subtotal		0	0	0	0	0	0	0	0	0	0	0
Liberia	Montserrado	0	0	0	0	0	0	0	0	0	0	0
Subtotal		0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0

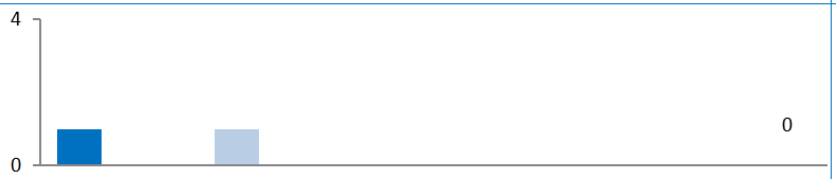
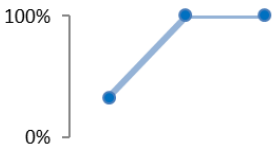
*Data are based on official information reported by ministries of health. These numbers are subject to change due to ongoing reclassification, retrospective investigation, and availability of laboratory results. *Data as of 20 December 2015.*

Table 3: Location and epidemiological status of confirmed cases reported in the 3 weeks to 20 December 2015

Country	Prefecture/ County	Sub-prefecture/ District	Week 49 (30 Nov–6 Dec 2015)	Week 50 (7–13 Dec 2015)	Week 51 (14–20 December 2015) Cases	On contact list	Epi-link*	Unknown source of infection‡	Confirmed community death§	Date of last confirmed case
Guinea	Forecariah	Kaliah	0	0						29/10/2015
Subtotal			0	0	0	0	0	0	0	
Liberia	Montserrado	Greater Monrovia	0	0						20/11/2015
Subtotal			0	0	0	0	0	0	0	
Total			0	0	0	0	0	0	0	

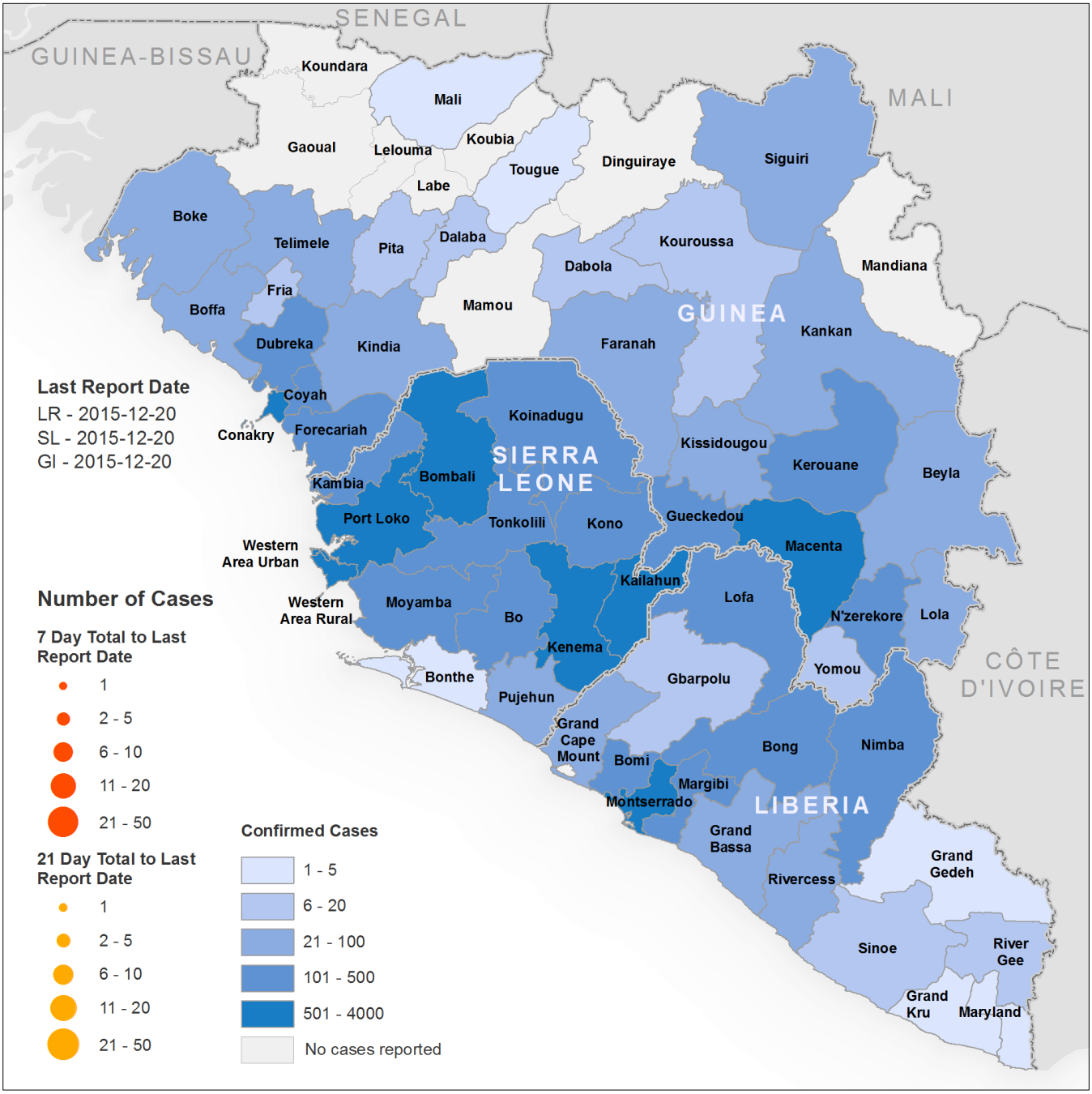
**Epi-link refers to cases who were not registered as contacts of a previous case (possibly because they refused to cooperate or were untraceable), but who, after further epidemiological investigation, were found to have had contact with a previous case, OR refers to cases who are resident or are from a community with active transmission in the past 21 days. ‡Includes cases under epidemiological investigation. §A case that is identified as a community death can also be registered as a contact, or subsequently be found to have had contact with a known case (epi-link), or have no known link to a previous case.*

Table 4: Key performance indicators for phase 3 objective 1 in Guinea

Indicator	Week 42	Week 51	Target
Number of confirmed cases			0
Number of confirmed deaths (total in light blue) and proportion that occurred in the community (dark blue)			0 0
Percentage of new cases from registered contacts		N/A	100%

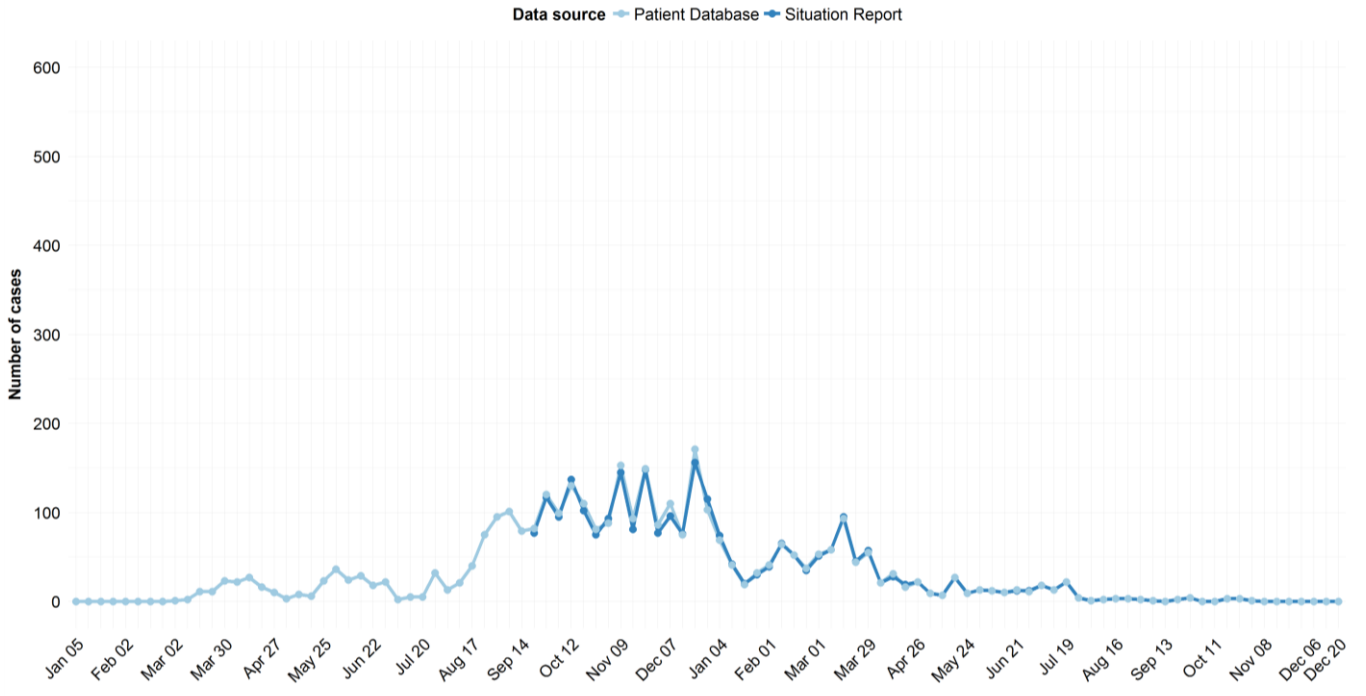
For definitions of key performance indicators see Annex 1. Week 42 commenced 12 October. Week 51 ended 20 December 2015.

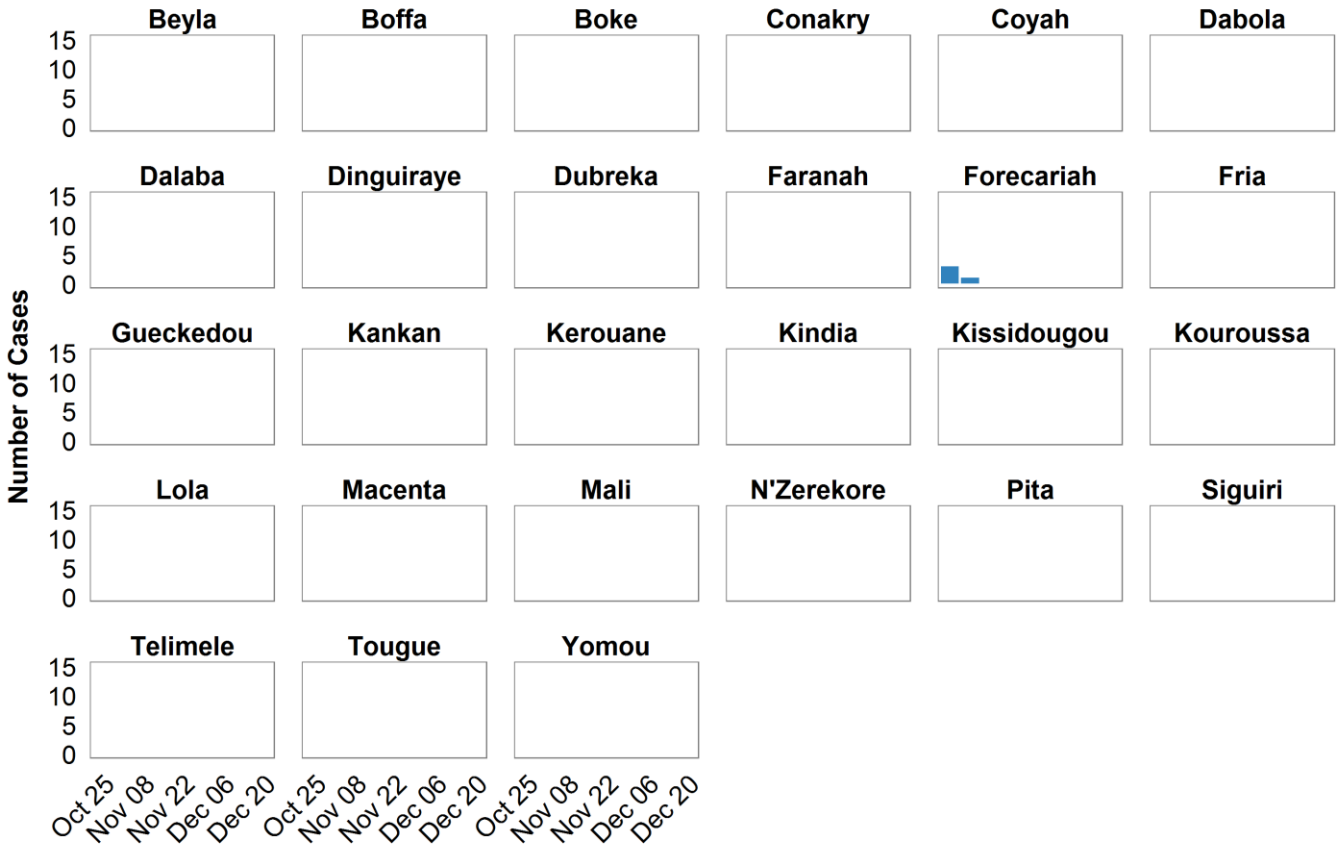
Figure 2: Geographical distribution of new and total confirmed cases in Guinea, Liberia, and Sierra Leone



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Figure 3: Confirmed weekly Ebola virus disease cases reported nationally and by prefecture from Guinea

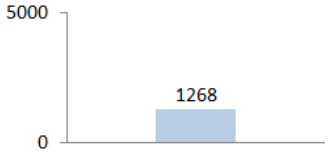
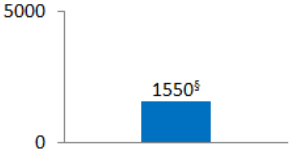
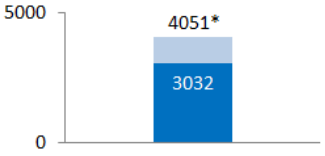
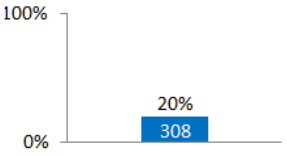
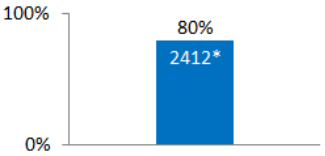
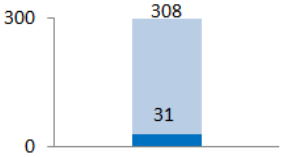
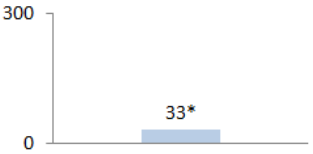
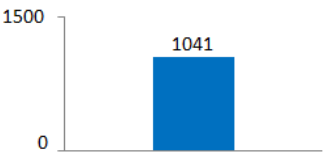
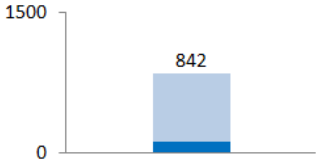
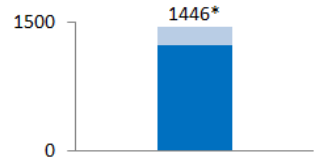
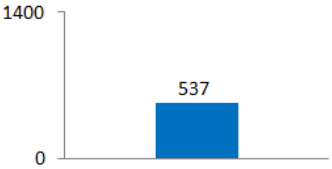
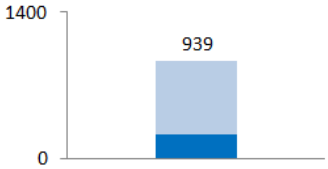
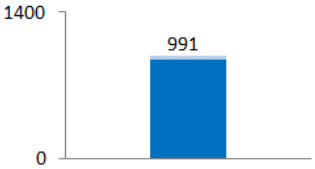
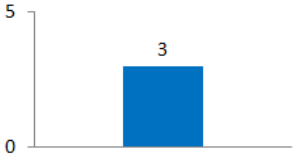
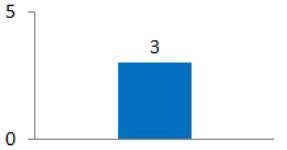
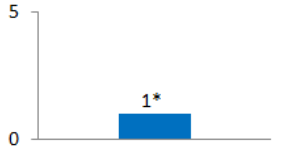
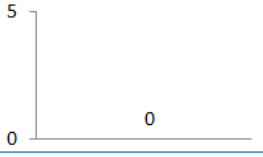
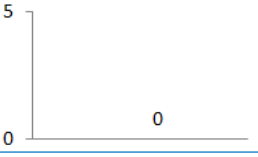




OBJECTIVE 2: MANAGE AND RESPOND TO THE CONSEQUENCES OF RESIDUAL EBOLA RISKS

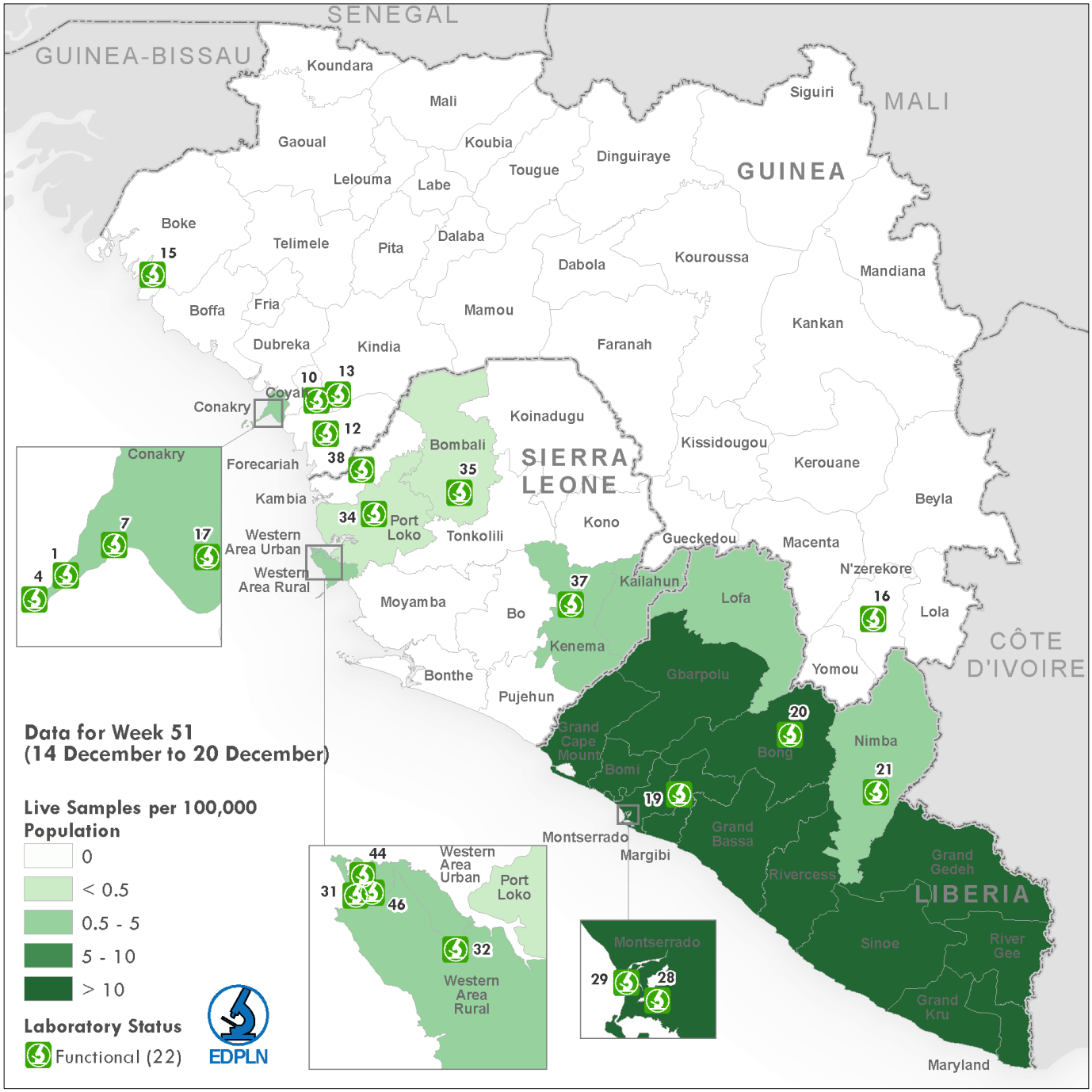
- Key performance indicators for objective 2 of the phase 3 response framework are shown for Guinea, Liberia, and Sierra Leone (table 5). A full list of phase 3 response indicators can be found in annex 2.
- The recent cluster of cases in Liberia is now understood to have been a result of the re-emergence of Ebola virus that had persisted in a previously infected individual. Although the probability of such re-emergence events is low, the risk of further transmission following an incident of re-emergence underscores the importance of implementing a comprehensive package of services for survivors that includes the testing of appropriate bodily fluids for the presence of Ebola virus RNA. The governments of Liberia and Sierra Leone, with support from partners including WHO and US CDC, have implemented voluntary semen screening and counselling programmes for male survivors in order to help affected individuals understand their risk and take necessary precautions to protect close contacts. A network of clinical services for survivors is also being expanded in Liberia and Sierra Leone, with plans for comprehensive national policies for the care of EVD survivors due to be completed in January 2016. Planning is also underway in Guinea, but is currently at an earlier stage of development.
- To manage and respond to the consequences of residual Ebola risks, Guinea, Liberia, and Sierra Leone have each put surveillance systems in place to enable health workers and members of the public to report any case of febrile illness or death that they suspect may be related to EVD to the relevant authorities. In the week to 20 December, 1036 community death alerts were reported in Guinea from all of the country's 34 prefectures. In Liberia, 842 alerts were received from all 15 of the country's counties over the same period. In Sierra Leone, 1446 alerts were reported from all of the country's 14 districts in the week ending 29 November (the most recent week for which data are available).
- As part of each country's EVD surveillance strategy, blood samples or oral swabs should be collected from any live or deceased individuals who have or had clinical symptoms compatible with EVD. In the week to 20 December, 9 operational laboratories in Guinea tested a total of 537 new and repeat samples from 13 of the country's 34 prefectures. The trend in the number of samples tested each week has remained flat for the past two months. 98% of all samples tested in Guinea were swabs collected from dead bodies. By contrast, 75% of the 939 new and repeat samples tested in Liberia over the same period were blood samples collected from live patients. In addition, all 15 counties in Liberia submitted samples for testing by the country's 5 operational laboratories. 991 new samples were collected from all 14 districts in Sierra Leone and tested by 8 operational laboratories. This is a marginal decrease compared with the previous week. 96% of samples in Sierra Leone were swabs collected from dead bodies (table 5; figures 4 and 5).
- 1036 deaths in the community were reported from Guinea in the week to 20 December through the country's alert system (table 5). This represents approximately 46% of the 2248 community deaths expected based on estimates of the population and a crude mortality rate of 11 deaths per 1000 people per year. 124 deaths in the community were reported from Liberia over the same period, representing approximately 13% of the 982 community deaths expected per week. In Sierra Leone, 1238 reports of community deaths were received through the alert system during the week ending 29 November (the most recent week for which data are available), representing approximately 60% of the 2075 deaths expected each.
- The deployment of rapid-response teams following the detection of a new confirmed case continues to be a cornerstone of the national response strategy in Guinea, Liberia, and Sierra Leone. Each country has at least 1 national rapid-response team, with strengthening of national and subnational rapid-response capacity and validation of incident-response plans continuing through December 2015 and January 2016.

Table 5: Key performance indicators for phase 3 objective 2 in Guinea, Liberia, and Sierra Leone in the week to 20 December

Indicator	Guinea	Liberia	Sierra Leone
Objective 2: Prevent (Survivors)			
Number of registered survivors (dark blue) and number estimated survivors (light blue)			
Number and percentage of registered survivors who have accessed the basic service package	Data not yet compiled.		
Number of male survivors' semen tested (light blue) and the number positive (dark blue)	Data not yet compiled.		
Objective 2: Detect (Surveillance)			
Number of alerts (those for live alerts in light blue and for community deaths in dark blue)			
Number of new samples tested (those from live patients in light blue and from dead bodies in dark blue)#			
Objective 2: Respond (Rapid response teams)			
Number of functional national and/or sub-national rapid response teams			
Number of national simulation exercises conducted			Simulations exercises conducted. Data not yet compiled.

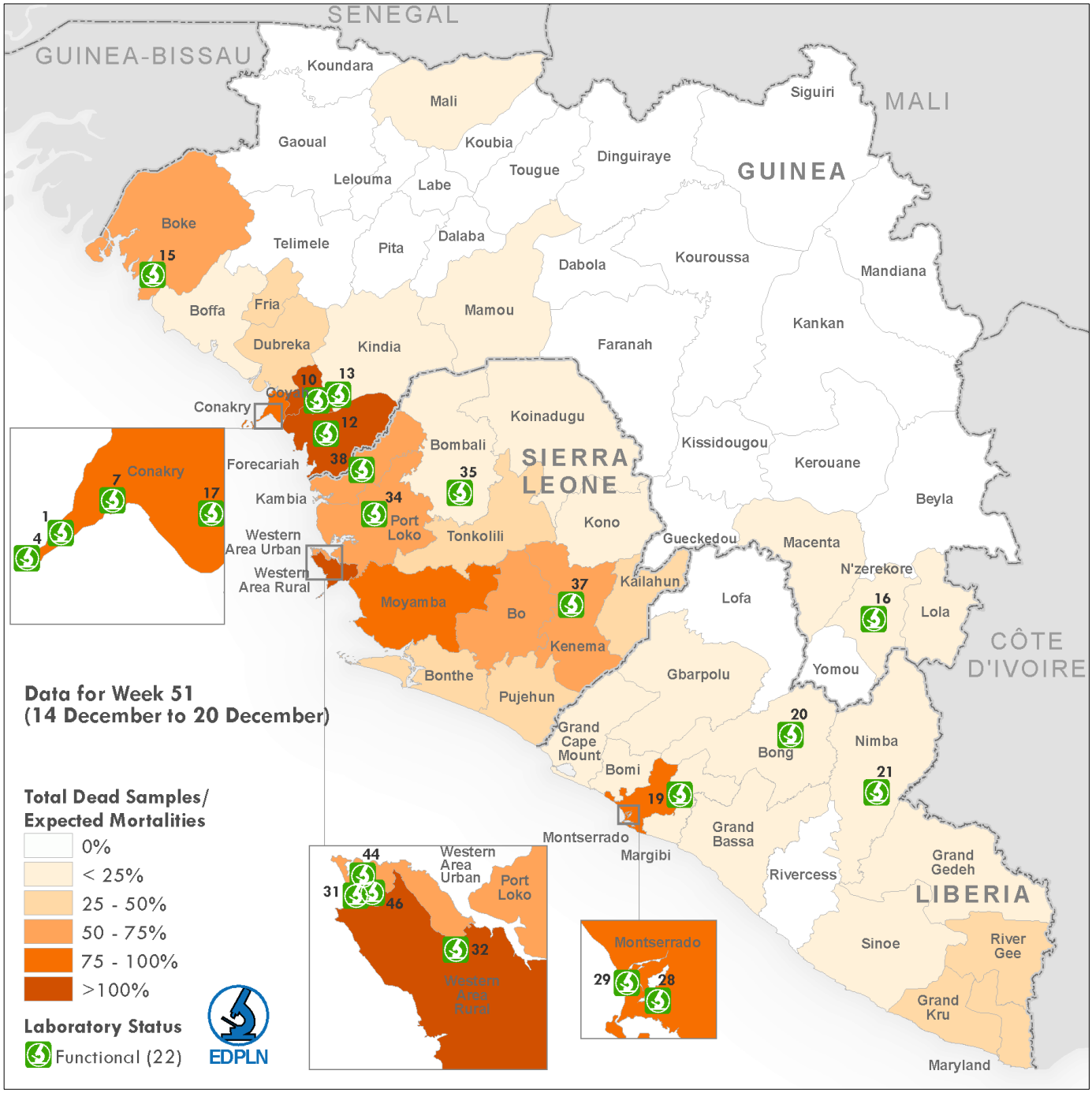
*All data provided by WHO country offices. *Data not from week ending 20 December 2015. §Number of estimated survivors not yet confirmed. #Total includes new and repeat samples in Guinea and Liberia, and new samples only in Sierra Leone. For definitions of key performance indicators see Annex 1.*

Figure 4: Location of laboratories and geographical distribution of samples from live patients in Guinea, Liberia, and Sierra Leone in the week to 20 December 2015



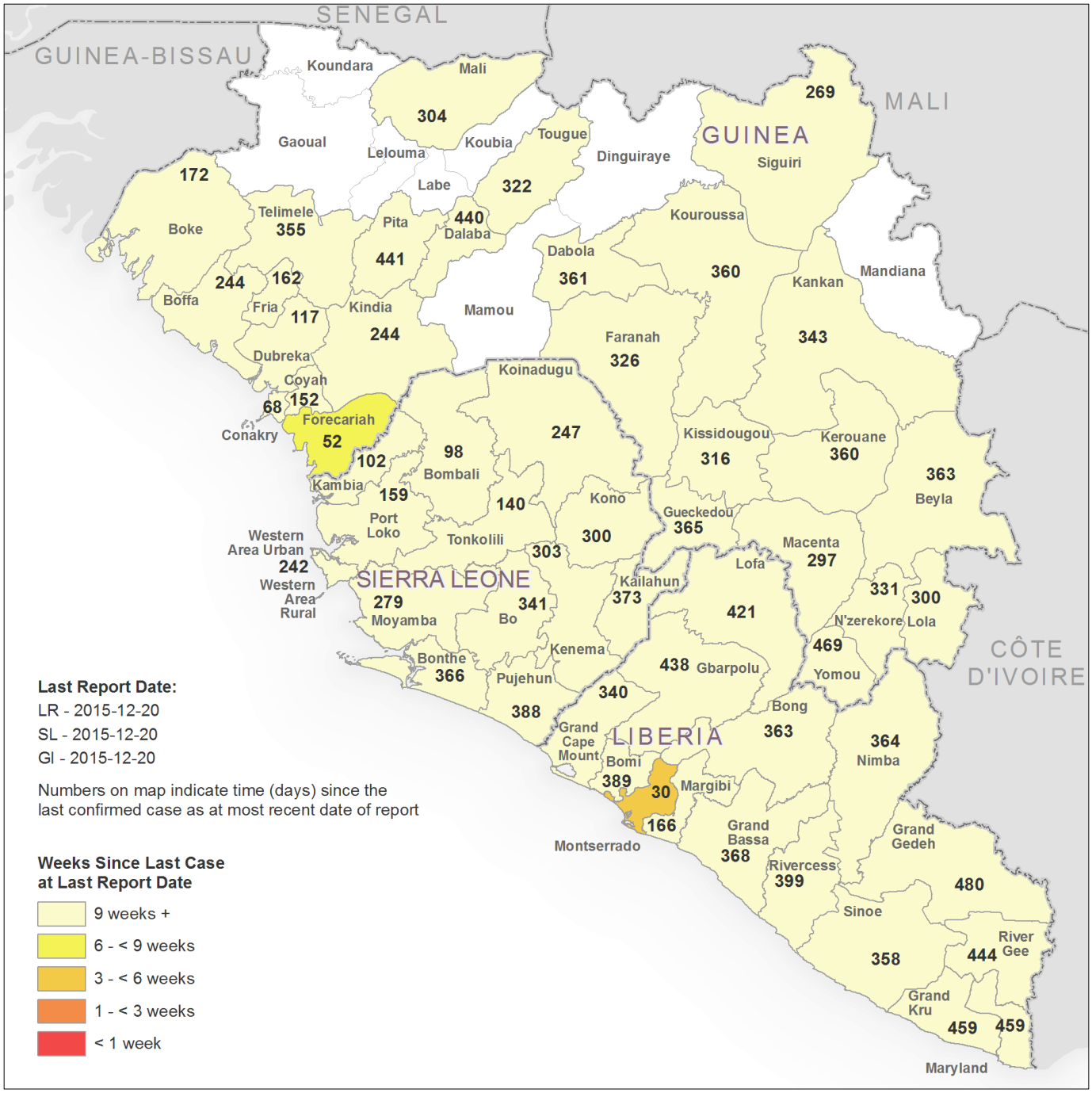
The analysis includes initial and repeat samples but excludes samples with unknown and incorrect testing weeks and samples with unknown or incorrect location information. EDPLN=Emerging and Dangerous Pathogens Laboratory Network. The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. 1=IP Dakar – Conakry; 4=K-Plan Mobile Lab – Conakry; 7=REDC Lab – Conakry; 10=EU Mobile Lab – Coyah; 12=K-Plan Mobile Lab – Forecariah; 13=CREMS Lab – Kindia; 15=Boke Mobile Lab; 16=INSP/PFHG/IPD LAB - N'Zérekore; 17= EUWAM Lab – Conakry; 19=LIBR National Reference Lab/USAMRIID; 20=OIC-NMRC Mobile Lab Bong; 21=Tappita Lab – Nimba; 28=MOH Lab – Montserrado; 29= Redemption Hospital Lab – Monsterrado; 31=EMDF/NICD – Western Area Urban; 32=China-CDC Lab – Jui; 34=PH England Mobile Lab – Port Loko; 35=PH England Mobile Lab – Makeni; 37=PH England Mobile Lab – Kenema; 38=Nigeria Mobile Lab – Kambia;.44=CPHRL/DTRA – Western Area Urban; 46=MOH/Emergency – PCMH/Freetown

Figure 5: Location of laboratories and geographical distribution of samples from dead bodies in Guinea, Liberia, and Sierra Leone in the week to 20 December 2015



The analysis includes initial and repeat samples but excludes samples with unknown and incorrect testing weeks and samples with unknown or incorrect location information. EDPLN=Emerging and Dangerous Pathogens Laboratory Network. The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. 1=IP Dakar – Conakry; 4=K-Plan Mobile Lab – Conakry; 7=REDC Lab – Conakry; 10=EU Mobile Lab – Coyah; 12=K-Plan Mobile Lab – Forecariah; 13=CREMS Lab – Kindia; 15=Boke Mobile Lab; 16=INSP/PFHG/IPD LAB - N'Zérekore; 17= EUWAM Lab – Conakry; 19=LIBR National Reference Lab/USAMRIID; 20=OIC-NMRC Mobile Lab Bong; 21=Tappita Lab – Nimba; 28=MOH Lab – Montserrado; 29= Redemption Hospital Lab – Monsterrado; 31=EMDF/NICD – Western Area Urban; 32=China-CDC Lab – Jui; 34=PH England Mobile Lab – Port Loko; 35=PH England Mobile Lab – Makeni; 37=PH England Mobile Lab – Kenema; 38=Nigeria Mobile Lab – Kambia;.44=CPHRL/DTRA – Western Area Urban; 46=MOH/Emergency – PCMH/Freetown

Figure 6: Time since last confirmed case in Guinea, Liberia, and Sierra Leone



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

PREVIOUSLY AFFECTED COUNTRIES

- Seven countries (Italy, Mali, Nigeria, Senegal, Spain, the United Kingdom, and the United States of America) have previously reported a case or cases imported from a country with widespread and intense transmission.

PREPAREDNESS OF COUNTRIES TO RAPIDLY DETECT AND RESPOND TO AN EBOLA EXPOSURE

- The introduction of an EVD case into unaffected countries remains a risk as long as cases exist in any country. With adequate preparation, however, such an introduction can be contained through a timely and effective response.
- WHO's preparedness activities aim to ensure all countries are ready to effectively and safely detect, investigate, and report potential EVD cases, and to mount an effective response. WHO provides this support through country support visits by preparedness-strengthening teams (PSTs) to help identify and prioritize gaps and needs, direct technical assistance, and provide technical guidance and tools.

Priority countries in Africa

- The initial focus of support by WHO and partners is on highest priority countries – Côte d'Ivoire, Guinea-Bissau, Mali, and Senegal—followed by high priority countries—Benin, Burkina Faso, Cameroon, Central African Republic, Ethiopia, Gambia, Ghana, Mauritania, Niger, South Sudan, and Togo. The criteria used to prioritize countries include the geographical proximity to affected countries, the magnitude of trade and migration links, and the relative strength of their health systems.
- Since October 2014, technical support has been provided to Benin, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Ethiopia, Gambia, Ghana, Guinea-Bissau, Mali, Mauritania, Niger, Senegal, South Sudan, and Togo through team missions and targeted technical support. Technical working group meetings, field visits, high-level table-top exercises, and field simulations have helped to identify key areas for improvement. Each country has a tailored plan to strengthen operational readiness.
- From October 2014 to December 2015, WHO has undertaken over 341 field deployments to work with Ministries of Health to address gaps or as part of multi-partner teams to support preparedness efforts in priority countries and to assist with the implementation of national plans.
- WHO provides personal protective equipment (PPE) modules containing minimum stocks to cover staff protection and other equipment needs to support 10 patient-beds for 10 days for all staff with essential functions. PPE modules have been delivered to all countries on the African continent. In addition, all countries have received a PPE training module.
- Contingency stockpiles of PPE are in place in the United Nations Humanitarian Response Depots in Accra and Dubai, and are available to any country in the event that they experience a shortage.

Ongoing follow-up support to priority countries

- Following initial PST assessment missions to the priority countries in 2014, a second phase of preparedness-strengthening activities have provided support on a country-by-country basis.
- Technical support is provided at the request of the respective ministries of health to strengthen EVD preparedness by operationalizing plans, testing systems, building capacity, and providing technical guidance.

EVD preparedness officers

- Dedicated EVD preparedness officers have been deployed to support the implementation of country preparedness plans, coordinate partners, provide a focal point for inter-agency collaboration, offer specific technical support in their respective areas of expertise, and develop capacity of national WHO staff. Preparedness officers are currently deployed to Benin, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Ethiopia, Gambia, Guinea-Bissau, Mauritania, Niger, Senegal, and Togo.

Training, exercises, and simulations

- Priority countries that have achieved a minimum of 50% implementation of preparedness checklist activities are encouraged to test outbreak preparedness and response by undertaking a series of skill drills on elements of an EVD response.
- Two technical staff have been appointed and are currently working with high priority countries to conduct needs assessment for surveillance training.
- In Togo, WHO will be providing support to the Ministry of Health with risk mapping in January 2016.

Surveillance and preparedness indicators

- Indicators based on surveillance data, case management capacity, laboratory testing, and equipment stocks continue to be collected on a weekly basis from the four countries that share a border with affected countries: Côte d'Ivoire, Guinea-Bissau, Mali, and Senegal.
- An interactive preparedness dashboard based on the WHO EVD checklist[1] is available online.

[1] See: http://who.int/csr/resources/publications/ebola/ebola-preparedness-checklist/en/

ANNEX 1: EBOLA RESPONSE PHASE 3 KEY PERFORMANCE INDICATORS

Indicator	Target	Numerator	Denominator
OBJECTIVE 1: Interrupt all chains of transmission			
Number of confirmed cases	0	# of new confirmed cases	N/A
Number of confirmed deaths and proportion that occurred in the community	0	# of total new confirmed deaths # of new community deaths with positive Ebola virus swab results	N/A
Percentage of new cases from registered contacts	100%	# of new confirmed cases registered as a contact	# of new confirmed cases
OBJECTIVE 2: Prevent (Survivors)			
Number of registered survivors and number estimated survivors	N/A 100%	# of registered survivors # of survivors estimated	N/A
Number and percentage of registered survivors who have accessed the basic service package	100%	# of registered survivors who have accessed the basic service package	# of registered survivors
Number of male survivors' semen tested and the number positive	N/A 0%	# of male survivors' semen tested positive for Ebola virus	# of male survivors' semen tested for Ebola virus
OBJECTIVE 2: Detect (Surveillance)			
Number of alerts	N/A	# of alerts	N/A
Number of samples tested (samples from live and dead suspects)	N/A	# of samples tested for Ebola virus (samples from live and dead suspects)	N/A
OBJECTIVE 2: Respond (Rapid response teams)			
Number of functional national and/or sub-national rapid response teams	3 per country	# of national rapid response teams appropriately staffed, equipped, and budgeted	N/A
Number of national simulation exercises conducted		# of national simulation exercises conducted	N/A

ANNEX 2: KEY EBOLA RESPONSE PHASE 3 PERFORMANCE INDICATORS

Indicator	Numerator	Denominator
OBJECTIVE 1: Interrupt all chains of transmission		
Number of confirmed cases	# of new confirmed cases	N/A
Number of confirmed deaths and proportion that occurred in the community	# of total new confirmed deaths and # of new community deaths with positive EVD swab results	N/A
Percentage of new cases from registered contacts	# of new confirmed cases registered as a contact	# of new confirmed cases
Number of newly infected health workers	# of newly infected health workers	N/A
Time in days between symptom onset and case isolation	Time between symptom onset and hospitalization of confirmed, probable, or suspected cases (geometric mean # of days)	N/A
Case fatality percentage	# of deaths among hospitalized confirmed cases	# of hospitalized confirmed cases with a definitive survival outcome
OBJECTIVE 2: Prevent (Survivors)		
Essentials services for survivors agreed	Essentials services for survivors agreed (yes/no)	N/A
Agency-specific responsibilities for survivors agreed under overall ECM/RC coordination	Agency-specific responsibilities for survivors agreed (yes/no)	N/A
Number of registered survivors and number estimated survivors	# of registered survivors # of survivors estimated	N/A
Number and percentage of registered survivors who have accessed the basic service package	# of registered survivors who have accessed the basic service package	# of registered survivors
Number of laboratories with capacity for testing semen for Ebola virus	# of laboratories with capacity for testing semen for Ebola virus	N/A
Counselling services, logistic capacity, and procedures in place to ship samples to appropriate laboratory and provide feedback	Counselling services, logistic capacity, and procedures in place to ship samples to appropriate laboratory and provide feedback (yes/no)	N/A
Number of male survivors' semen tested and the number positive	# of male survivors' semen tested positive for Ebola virus	# of male survivors' semen tested for Ebola virus
Number of primary healthcare facilities providing essential services for survivors	# of primary healthcare facilities providing essential services for survivors	N/A
Number of referral healthcare facilities for survivors	# of referral healthcare facilities for survivors	N/A
Coordination mechanism with WASH partners in place	Coordination mechanism with WASH partners in place (yes/no)	N/A
OBJECTIVE 2: Detect (Surveillance)		
Number of alerts	# of alerts	N/A
Percentage of prefectures/ counties/ districts reporting alerts	# of prefectures/ counties/ districts reporting alerts	Total # of prefectures/ counties/ districts
Percentage of live alerts tested for Ebola virus	# of live alerts tested for Ebola virus	# of reported live patients meeting criteria for Ebola virus testing
Percentage of expected community deaths that were reported	# of reported community deaths *(Sierra Leone: # of reported burial alerts)*	# of expected community deaths (= crude mortality * population)
Percentage of reported community deaths that were swabbed and those which were Ebola virus positive	# of community deaths that were swabbed for Ebola virus *(Liberia and Sierra Leone: # of Ebola virus swabs)* # of new community deaths with positive Ebola virus swab results	# of reported community deaths *(Sierra Leone: # of reported burial alerts)*
Number of samples tested (samples from live and dead suspects)	# of samples tested for Ebola virus (samples from live and dead suspects)	N/A
Percentage of prefectures/ counties/ districts providing samples for Ebola virus testing	# of prefectures/ counties/ districts providing samples for Ebola virus testing	Total # of prefectures/ counties/ districts
Number of unsafe burials	# of burials that were reported to be unsafe	N/A
Number of prefectures/ counties/ districts with at least one security incident or other form of refusal to cooperate	# of prefectures/ counties/ districts with at least one security incident or other form of refusal to cooperate in the past week	N/A
OBJECTIVE 2: Respond (Rapid response teams)		
Number of functional national and/or sub-national rapid response teams	# of national and/or sub-national rapid response teams appropriately staffed, equipped, and budgeted	N/A
Time between confirmation of an event and deployment of rapid response team	# of days between confirmation of an event and deployment of the team	N/A
Number of generations of cases and secondary cases after identification of a new index case	# of generations of cases and secondary cases after identification of a new index case	N/A
Number and percentage of prefectures/ counties/ districts with isolation capacity or referral plan of suspect cases	# of prefectures/ counties/ districts with isolation capacity or referral plan of suspect cases	Total # of prefectures/ counties/ districts
Number of national simulations exercises conducted	# of national simulations exercises conducted	N/A
Number of functional international rapid response support teams on stand-by	# of international rapid response support teams on stand-by which are appropriately staffed trained, equipped, and budgeted	N/A
Time between request for international response and deployment of international rapid response support team(s)	# of days between request for international response and deployment of international rapid response support team(s)	N/A
Number of international simulation exercises conducted	# of international simulation exercises conducted	N/A